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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,056	03/22/2007	Kwang Suck Suh	SUHK3001/REF	5781

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EXAMINER

PHAN, THIEM D

ART UNIT	PAPER NUMBER
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3729

MAIL DATE	DELIVERY MODE
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06/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/550,056		SUH ET AL.	
	Examiner		Art Unit	
	THIEM PHAN		3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/21/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 1, before “Technical Field”, insert:

“Cross-Reference to Related Application

This application is the U.S. National Phase under 35 U.S.C. 371 of International Application PCT/KR04/00627, filed March 22, 2004, which claims priority to Republic of Korea Patent Application No. 10-2003-0017904, filed March 21, 2003.”

Claim Objections

2. Claim 15 is Product Claim and further objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim 1, which is Method Claim. Applicants are required to cancel claim 15, or amend the claim to place the claim in proper dependent form. Claim 1 recites a method of specifically providing a point to ground resistance to trays while dependent claim 14 is a generic article which can be infringed without infringing the base method claim as the product can be made by a method other than that recited in the base method claim. Furthermore, the Product-by-Process Claim 15 is only limited to the general structure of the article, not the manufacturing steps involved.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US 6,780,490).

Regarding claim 1, Hanaoka et al teach a process of fabricating a tray for electronics device, comprising:

- molding into a tray sheet (Fig. 1, 1; col. 10, lines 1-24) made of thermoplastic resin including polymeric antistatic (Col. 6, lines 21-29) and conductive coated carbon (Col. 7, lines 7-9), except for having a separated polymer sheet to be then coated with antistatic conductive layer for the tray;
- cutting the conductive sheet (Fig. 2a, areas marked with width of 10, 12 or 15 mm) to be formed into the tray having cut surfaces; and
- forming a conductive pathway on all or parts of the cut surfaces of the tray, due to conductive material (Col. 6, lines 24-26; col. 10, lines 2-4).

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have a separated polymer sheet to be then coated with antistatic conductive layer for the tray because applicants have not disclosed that having a separated polymer sheet to be then coated with antistatic conductive layer for the tray provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in

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the art, furthermore, would have expected applicants' invention to perform equally well with a complete mixture of polymeric and conductive antistatic material (Fig. 1, 1) forming the tray shell as well. Therefore, it would have been an obvious matter of design choice to modify Hanaoka et al to obtain the invention as specified in Claims 1.

Regarding claim 12, Hanaoka et al teach that the conductive pathway is formed by using an antistatic polymer (Col. 6, lines 21-29).

5. Claims 2-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al in view of Applicants' Admitted Prior Art, hereinafter AAPA.

Regarding claims 2 and 13, Hanaoka et al teach a process of fabricating a tray for electronics device, which reads on applicants' claimed invention; except for forming a conductive pathway as a coating of conductive solution or an antistatic and conductive tape at the cut surfaces of the tray.

AAPA teaches a method of making tray by coating an antistatic layer on any surface, cut or noncut, of the polymeric tray (Page 2, lines 24 & 25).

It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Hanaoka et al, by applying a coating of conductive and antistatic layer to any cut surfaces, as taught by AAPA, in order to increase the conductivity and antistatic characteristics of its surfaces because the tray composition, already made of conductive antistatic material, will help increasing the grounding process of these coating surfaces.

Regarding claim 3, Hanaoka et al teach the molding techniques (Col. 10, lines 1-23) of the try. It would be obvious to one of ordinary skill in the art at the time the invention was made

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to perform a heat curing at the thermoplastic with the polymeric and coated conductive solution or mixture.

Regarding claim 4, Hanaoka et al teach that the conductive solution or mixture comprises 15 to 60 parts by weight per 100 of the thermoplastic (Col. 8, lines 4 & 5), the conductive material being selected from the group consisting of a conductive polymer, conductive carbon, a metal, and mixtures thereof (Col. 7, lines 1-13).

Regarding claims 5 and 6, Hanaoka et al teach that the conductive polymer is selected from the group of polymer derivatives or the like and mixtures thereof (Col. 6, lines 37-46).

Regarding claim 7, Hanaoka et al teach that the conductive carbon comprises carbon fibers or conductive carbon black (Col. 7, lines 48 and 56).

Regarding claim 8, Hanaoka et al teach that the metal comprises copper (Col. 7, line 5).

Regarding claim 9, Hanaoka et al teach that the metal oxide comprises doped indium oxide or tin oxide (Col. 6, line 61).

Regarding claim 10, Hanaoka et al teach a process of fabricating a tray for electronics device, which reads on applicants' invention; except for using a variety of surfactants.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use a variety of surfactants as antistatic conductive layer for the tray because applicants have not disclosed that using a variety of surfactants as antistatic conductive layer for the tray provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicants' invention to perform equally well with a complete mixture of polymeric and conductive antistatic material (Fig. 1, 1) forming the tray shell as well and

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applicants further specify that the surfactants (Specification; Page 6, line 4) or carbon black, as taught by Hanaoka et al, can be both applied in the claimed invention. Therefore, it would have been an obvious matter of design choice to modify Hanaoka et al to obtain the invention as specified in Claim 10.

Regarding claim 11, Hanaoka et al teach a process of fabricating a tray for electronics device, including the molding into a tray sheet (Fig. 1, 1; col. 10, lines 1-24) a material made of thermoplastic resin composing of polymeric antistatic (Col. 6, lines 21-29) and conductive coated carbon (Col. 7, lines 7-9).

It would be obvious to one of ordinary skill in the art at the time the invention was made to have the thickness of the conductive layer with a range of a few nanometers to the thickness of the tray, due to the conductive material in the mixture.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M & Tu, 6AM - 2PM, and W & Th, 9AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

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Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Phan Thiem/

Tim Phan
Examiner
Art Unit 3729

June 4, 2008